ADROIT 2K'21

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INSTITUTE OF TECHNOLOGY

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PULLOOR - 626 115, KARIAPATTI (TK), VIRUDHUNAGAR DISTRICT.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ADROIT 2K'21

SETHU INSTITUTE OF TECHNOLOGY

An Autonomous Institution

DEPARTMENT OF ELECTRONICS AND COMMUNICATION

(Accredited by NBA, New Delhi)

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YEARLY MAGAZINE
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VISION AND MISSION OF THE INSTITUTE

Institute Vision:

To promote excellence in technical education and scientific research for the benefit of the society

Institute Mission:

- To provide quality technical education to fulfill the aspiration of the student and to meet the needs of the Industry.
- To provide holistic learning ambience.
- To impart skills leading to employability and entrepreneurship.
- To establish effective linkage with industries.
- To promote Research and Development activities.
- To offer services for the development of society through education and technology.

VISION AND MISSION OF THE DEPARTMENT

Department Vision:

To achieve excellence in education and research in the field of Electronics and Communication Engineering for the development of society

Department Mission

- Imparting quality technical education in Electronics and Communication Engineering through contemporary laboratory facilities and accomplished faculty to cater to the needs of the industry
- Providing a conducive learning environment through the state of the art infrastructure and innovative teaching learning practices
- Infusing the professional skills needed for employability and entrepreneurship
- Collaborating with industries for mutual benefit of knowledge transfer
- Promoting research in Electronics and Communication Engineering
- Providing services to the society through extension activities and technology enabled services

ADROIT 2K'21

PROGRAMME EDUCATIONAL OBJECTIVES (PEO's)

- Possess strong technical knowledge in Electronics and Communication Engineering to address the real world challenges **(Core Competence)**
- Demonstrate continual interest to learn new technologies for successful professional career **(Lifelong Learning)**
- Exhibit professional skills and practice ethical principles with social consciousness **(Professionalism)**

PROGRAMME OUTCOMES (PO's)

1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems. **(Engineering knowledge)**
2. Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. **(Problem Analysis)**
3. Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations**. (Design and Development of Solutions)**
4. Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions**. (Conduct Investigations of Complex Problems)**
5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. **(Modern Tool Usage)**

6. Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice. **(The Engineer and Society)**

7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **(Environment and Sustainability)**

8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. **(Ethics)**

9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **(Individual and Team Work)**

10. Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions. **(Communication)**

11. Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments. **(Project Management and Finance)**

12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. **(Life-long learning)**

Articles

MICROELECTRONIC PILL

The invention of transistor enabled the first use of radiometry capsules, which used simple circuits for the internal study of the gastro-intestinal (GI) [1] tract. They couldn't be used as they could transmit only from a single channel and also due to the size of the components.

They also suffered from poor reliability, low sensitivity and short lifetimes of the devices. This led to the application of single-channel telemetry capsules for the detection of disease and abnormalities in the GI tract where restricted area prevented the use of traditional endoscopy.They were later modified as they had the disadvantage of using laboratory type sensors such as the glass pH electrodes, resistance thermometers, etc. They were also of very large size. The later modification is similar to the above instrument but is smaller in size due to the application of existing semiconductor fabrication technologies. These technologies led to the formation of "MICROELECTRONIC PILL".Microelectronic pill is basically a multichannel sensor used for remote biomedical measurements using micro technology. This is used for the real-time measurement parameters such as temperature, pH, conductivity and dissolved oxygen. The sensors are fabricated using electron beam and photolithographic pattern integration and were controlled by an application specific integrated circuit (ASIC).

BLOCK DIAGRAM

Microelectronic pill consists of 4 sensors (2) which are mounted on two silicon chips (Chip 1 & 2), a control chip (5), a radio transmitter (STD- type 1-7, type2-crystal type-10) & silver oxide batteries (8). 1-access channel, 3-capsule, 4- rubber ring, 6-PCB chip carrier

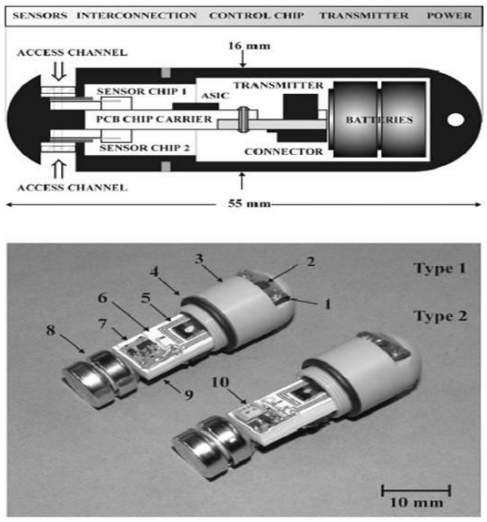

Fig., 1.MICROELECTRONIC PILL

BASIC COMPONENTS

A. Sensors

There are basically 4 sensors mounted on two chips- Chip 1 & chip 2. On chip 1(shown in fig 2 a), c), e)), temperature sensor silicon diode (4), pH ISFET sensor (1) and dual electrode conductivity sensor (3) are fabricated. Chip 2 comprises of three electrode electrochemical cell oxygen sensor (2) and optional NiCr resistance thermometer.

1) Sensor chip 1:

An array consisting of both temperature sensor & pH sensor platforms were cut from the wafer & attached onto 100-µm- thick glass cover slip cured on a hot plate. The plate acts as a temporary carrier to assist handling of the device during level 1 of lithography when the electric connections tracks, electrodes bonding pads are defined. Bonding pads provide electrical contact to the external electronic circuit.Lithography [2] was the first fundamentally new printing technology since the invention of relief printing in the fifteenth century.

It is a mechanical Plano graphic process in which the printing and non-printing areas of the plate are all at the same level, as opposed to intaglio and relief processes in which the design is cut into the printing block. Lithography is based on the chemical repellence of oil and water. Designs are drawn or painted with greasy ink or crayons on specially prepared limestone. The stone is moistened with water, which the stone accepts in areas not covered by the crayon. Oily ink, applied with a roller, adheres only to the drawing and is repelled by the wet parts of the stone. Pressing paper against the inked drawing then makes the print.

Lithography was invented by AloisSenefelder in Germany in 1798 and, within twenty years, appeared in England and the United States. Almost immediately, attempts were made to print pictures in color. Multiple stones were used; one for each color, and the print went through the press as many times as there were stones. The problem for the printers was keeping the image in register, making sure that the print would be lined up exactly each time it went through the press so that each color would be in the correct position and the overlaying colors would merge correctly.

Early colored lithographs used one or two colors to tint the entire plate and create a watercolor-like tone to the image. This atmospheric effect was primarily used for landscape or topographical illustrations. For more detailed coloration, artists continued to rely on hand coloring over the lithograph. Once tinted lithographs were well established, it was only a small step to extend the range of color by the use of multiple tint blocks printed in succession. Generally, these early chromolithographs were simple prints with flat areas of color, printed side-by-side.

Increasingly ornate designs and dozens of bright, often gaudy, colors characterized chromolithography in the second half of the nineteenth century. Overprinting and the use of silver and gold inks widened the range of color and design. Still a relatively expensive process, chromolithography was used for large-scale folio works and illuminated gift books that often attempted to reproduce the handwork of manuscripts of the Middle Ages. The steam-driven printing press and the wider availability of inexpensive paper stock lowered production costs and made chromolithography more affordable. By the 1880s, the process was widely used for magazines and advertising. At the same time, however, photographic processes were being developed that would replace lithography by the beginning of the twentieth century.

ULAGESHINI S – IV YEAR/ECE

8K HIGH RESOLUTION CAMERA SYSTEM

Digital cinema is a promising application that utilizes high-speed optical networks to transfer super high definition (SHD) images. The networks are primarily used for distributing digital cinema contents in packet data form, and are also used to support new services such as the live streaming of musicals and sport games to movie theaters**.**

While current transfer services offer high-definition (HD) quality video, live-streaming applications will soon shift to providing cinema quality 8K content to both business and movie theaters users.

The extra- high-quality 8K format enables a realistic telepresence, and will be combined with special tools such as video editing systems to realize effective remote collaboration for business workspaces. This paper introduces successive research on SHD image transmission and its application, especially in digital cinema and associated application fields.

Four years before the digital cinema industry standardized the DCI specification, in 2001, the worlds first video JPEG decoder system was developed that could display SHD images (38402048 pixel spatial resolution) with 24-frames/s time resolution. This decoder was designed to realize IP transmission of extra-high-quality videos, while fully utilizing the full bandwidth of emerging commercial communication networks based on 1-Gb Ethernet. In 2002, the second prototype SHD image decoder was developed that exploits a highly parallel processing unit of JPEG2000 de-compressors.

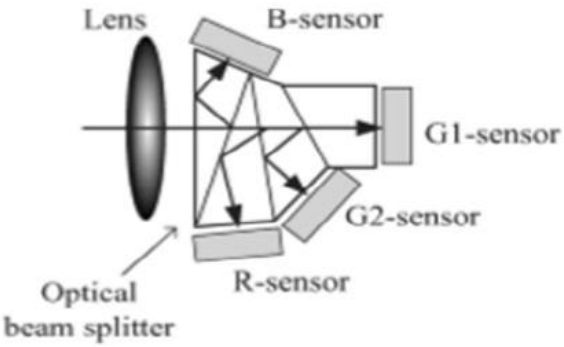

Fig.,1. 8K High Resolution Camera System

The decoder receives the IP streams of compressed video contents transmitted by a video server over a 1-GbE network, and decodes them using the standard JPEG2000 decoding algorithm in real time. The decoder was combined with a special 38402048 pixel projector using a dedicated digital video interface for the decoder. This architecture allows the decoded videos to be transferred and shown in completely digital form.

This system triggered detailed discussions on the digital cinema video format for DCI. The question was whether a higher image quality than HDTV was required to replace movie films. In order to solve the question, an experiment was conducted by the Entertainment Technology Center (ETC) of the University of Southern California (USC)

involving 100 digital cinema engineers; it compared the image quality of conventional films, highdefinition television (HDTV), and SHD images with 8-million-pixel resolution.
The results of this experiment yielded the consensus that the horizontal resolution of around 4000 pixels was required to replace films, and JPEG2000 was suitable for the compression of digital cinema data. Stimulated by the experiment, DCI accelerated the standardization of digital cinema, specified the movie format of 40962160 pixels, and simply called it 8K. DCI finalized version 1.0 in 2005 and version 1.2 in 2008.

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Currently, further standardization activities are in progress at the Society of Motion Picture and Television Engineer (SMPTE). To explore the application range of 8K video beyond digital cinema, we developed a JPEG2000-based 8K real time streaming codec system. This codec can compress/ decom- press 8K videos: the total bit rate exceeds 12 Gb/s (4 : 2 : 2, 60 frames/s), and the resulting 5001000-Mb/s compressed streams are transferred as IP packets.

While digital cinema em- ploys the 24-frames/s movie format to replicate the cinema style, it is believed that at least 60 frames/s is needed for realistic video communication services such as teleconferencing. The following sections describe the features of the 8K imaging systems used in digital cinema and live streaming.

-S.A.SNEHA/IV YEAR

QUIZ

1.What is a collection of interconnected electrical devices such that charge,usually electrons, can flow through it continuously without beginning or end?

A) circuit diagram B) electric circuit C) electronic components D) circuit symbols

2.What is a pictogram used to represent various electrical and electronic devices or functions, such as wires, batteries, etc. in a schematic diagram of an electrical or electronic circuit?

A) circuit diagram B) electric circuit C) electronic components D) circuit symbols

3.In Electronics, PCB stands for _____.

A) Printed Circuit Base **B) Passive Component Board**
C)Printed Connection Board **D)Printed Circuit Board**

4.What electronic component has this symbol?

A) Ammeter B) voltmeter C) ohmmeter D) galvanometer

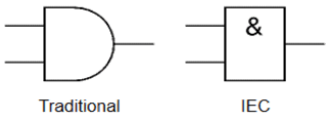
5.What transducer converts electrical energy to kinetic energy (motion)?

A) buzzer B) amplifier C) motor D) heater

6.What transducer converts sound to electrical energy?

A) Buzzer B) loudspeaker C) earphone D) microphone

7.This symbol represents _____ logic gate.



A) AND B) NAND C) NOT D) NOR

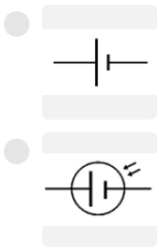
8.What electrical component is used to step up (increase) and step down (decrease) AC voltages?

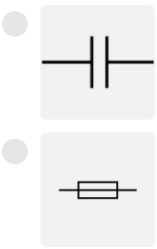
A) coil B) motor C) fuse D) transformer

9.Which component has this as its circuit symbol?

A) ac supply B) dc supply C) open switch D) closed switch

10.Which of the following is the symbol for capacitor?





Do you know?
Crowds at one Louisiana State University football game once cheered so loudly that it registered as an earthquake on a local seismograph.

11.What is the component supplies electrical energy to a circuit, where the current is continually changing direction ?

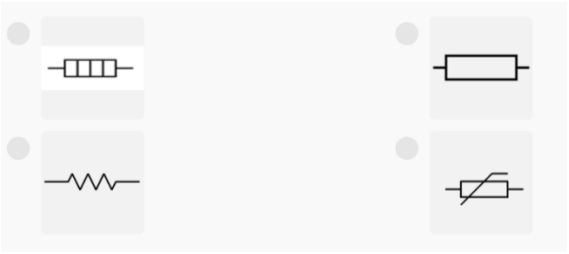
A) directcurrentsupply **B) alternating current supply**

C) battery **D) power supply**

12.What does this symbol represent?

A) diode B) capacitor C) transistor D) resistor

13.What is the new symbol for resistor?



Do you know?

"Q" is the only letter that doesn't appear in any U.S. state name.

14.What instrument is used to measure electrical resistance?

A) galvanometer B) ammeter C) voltmeter D) ohmmeter

15.What sensitive instrument is used to measure tiny currents, usually 1 mA or less?

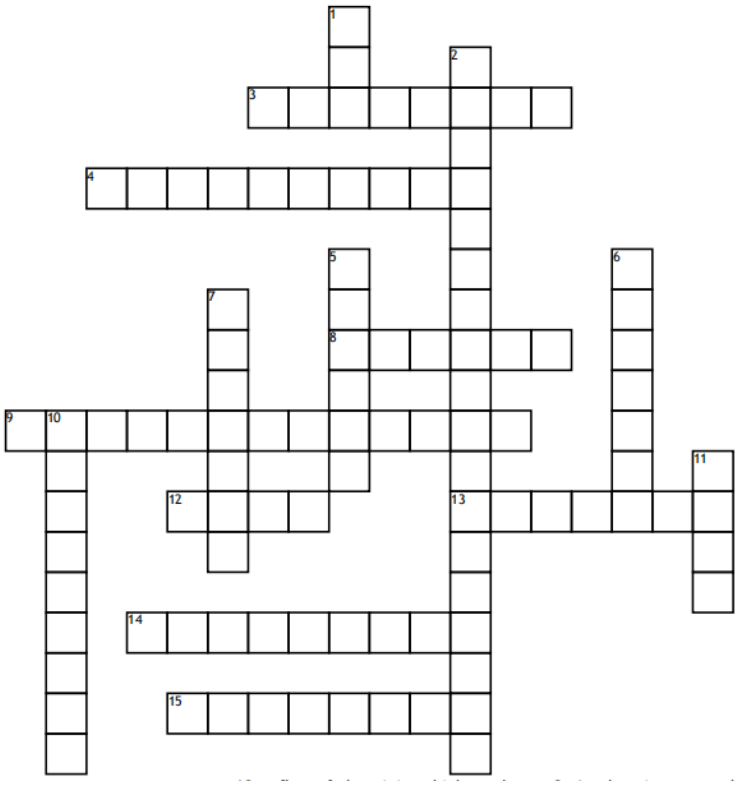
A) ammeter B) galvanometer C) oscilloscope D) voltmeter

ANSWERS :

1)B 2)D 3)D 4)B 5)C 6)D 7)A 8)D 9)B 10)B 11)B 12)A 13)B 14)D 15)B

YASIKA SM-IV YEAR-ECE

ELECTRONICS PUZZLE



Do you know?

The top speed of the winning car in the first U.S. race was seven miles per hour.

ACROSS

1.A law relating the voltage difference between two points, and the electric current flowing between them

4. the degree to which a substance or device opposes the passage of an electric current, causing energy dissipation

8. stable subatomic particle occurring in all atomic nuclei, with a positive electric charge equal in magnitude to that of an electron, but of opposite sign 9. an electric current flowing in one direction only.

12. the SI unit of electromotive force, the difference of potential that would drive one ampere of current against one ohm resistance

13. a flow of electricity which results from the ordered directional movement of electrically charged particles.

14. a material or device that conducts or transmits electricity

15. - a stable subatomic particle with a charge of negative electricity, found in all atoms and acting as the primary carrier of electricity in solids

Down

1. the SI unit of electrical resistance, expressing the resistance in a circuit transmitting a current of one ampere when subjected to a potential difference of one volt.

2. An electric current that reverses its direction many times a second at regular intervals, typically used in power supplies
5. a unit of electric current equal to a flow of one coulomb per second 6. an electromotive force or potential difference expressed in volts

7. Neutron a subatomic particle of about the same mass as a proton but without an electric charge, present in all atomic nuclei except those of ordinary hydrogen
10. a substance or device that does not readily conduct electricity
11. The basic unit of a chemical element

ANSWERS:

1. Ohm 2. Alternating 3. Ohm's Law 4. Resistance 5. Ampere 6. Voltage 7.Neutron 8. Proton 9. Direct Current 10. Insulator 11. Atom 12.Volt 13.Current 14.Conductor 15. Electron

UMA MAHESWARI G-IV YEAR, ECE

TAMIL RIDDLES

1. இலையுண்டு கிளையில்லை, பூ உண்டு மணமில்லை, காய் உண்டு விதையில்லை, பட்டை உண்டு கட்டை இல்லை, கன்று உண்டுபசு இல்லை அது என்ன?

2. எவ்வளவு அவனை கடிக்க முயன்றாலும் முடியாது. அவன் இல்லாமல் உணவே இல்லை. அவன் யார் ?

3. பூ பூக்கும். காய் காய்க்கும். ஆனால் பழம் பழுக்காது. அது என்ன?

4. இளமையில் பச்சை, சிகப்பு, விடைமுதுமையில் குணத்திலே எரிப்பு தெரியுமா?

5. தாய் குப்பையிலே, மகள் சந்தையிலே அவை என்ன?

6. ஓடியாடித்திரியும் உடலைத் தேடிக் குத்தும்அது என்ன?

7. அக்கா வீட்டுக்குத் தங்கை போவாள்..ஆனால், தங்கை வீட்டுக்கு அக்கா வர முடியாது! அது என்ன?

8. நீரிலே பிறப்பான்..வெயிலிலே வளர்வான்நீரிலே இறப்பான்..! அவன் யார்?

9. கடுகு மடிக்க இலை இல்லை, யானைபடுக்க இடமுண்டு- அதுஎன்ன?

10. அச்சு இல்லாத சக்கரம்: அழகு காட்டும் சக்கரம்

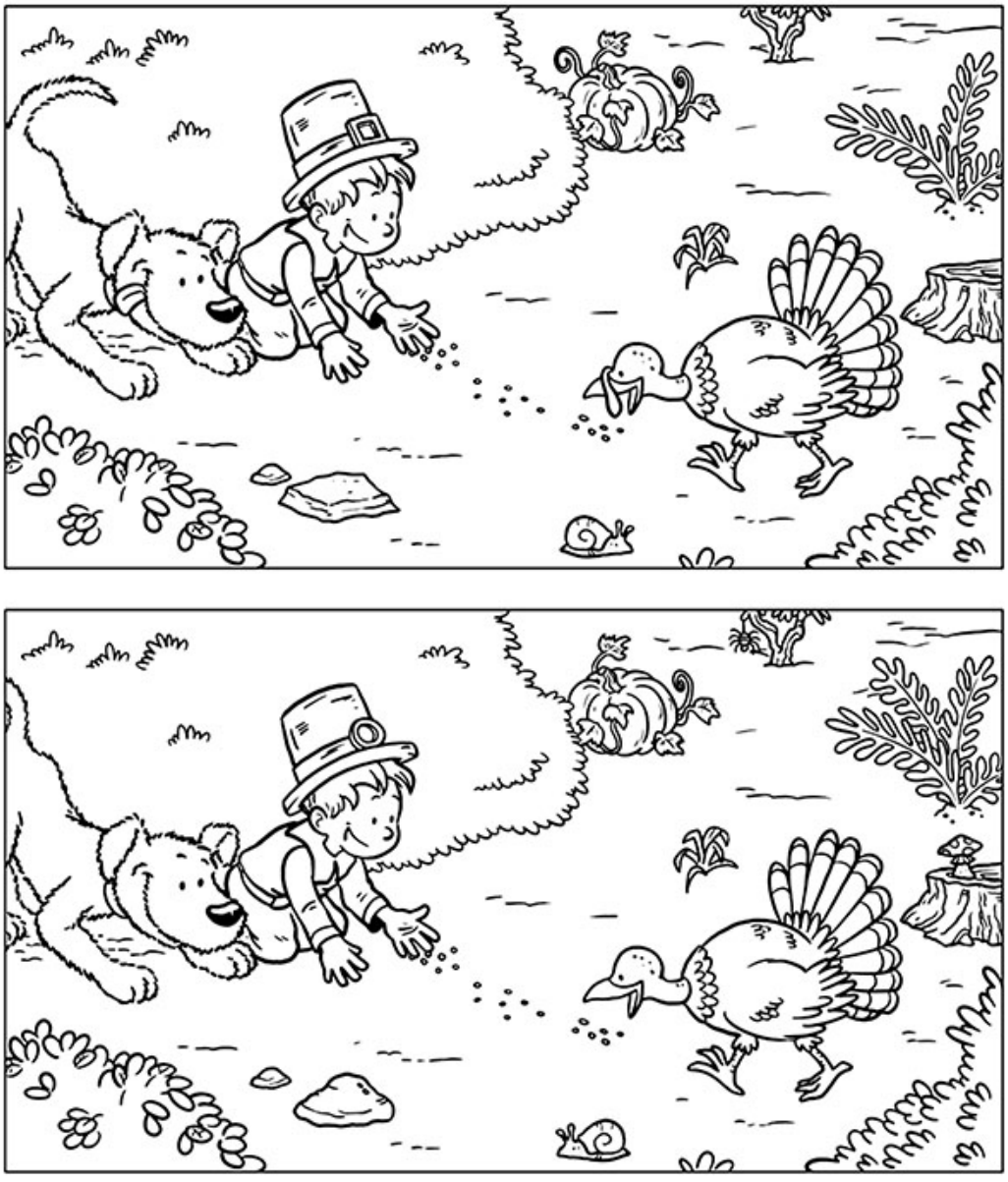
ANSWERS:

1) வாழை 2) தண்ணீர் 3) தேங்காய் 4) மிளகாய்
2) 5) நெல் 6) கொசு 7)கால்படி, அரைபடி
3) 8) உப்பு 9) சவுக்குமரம் 10) வளையல்

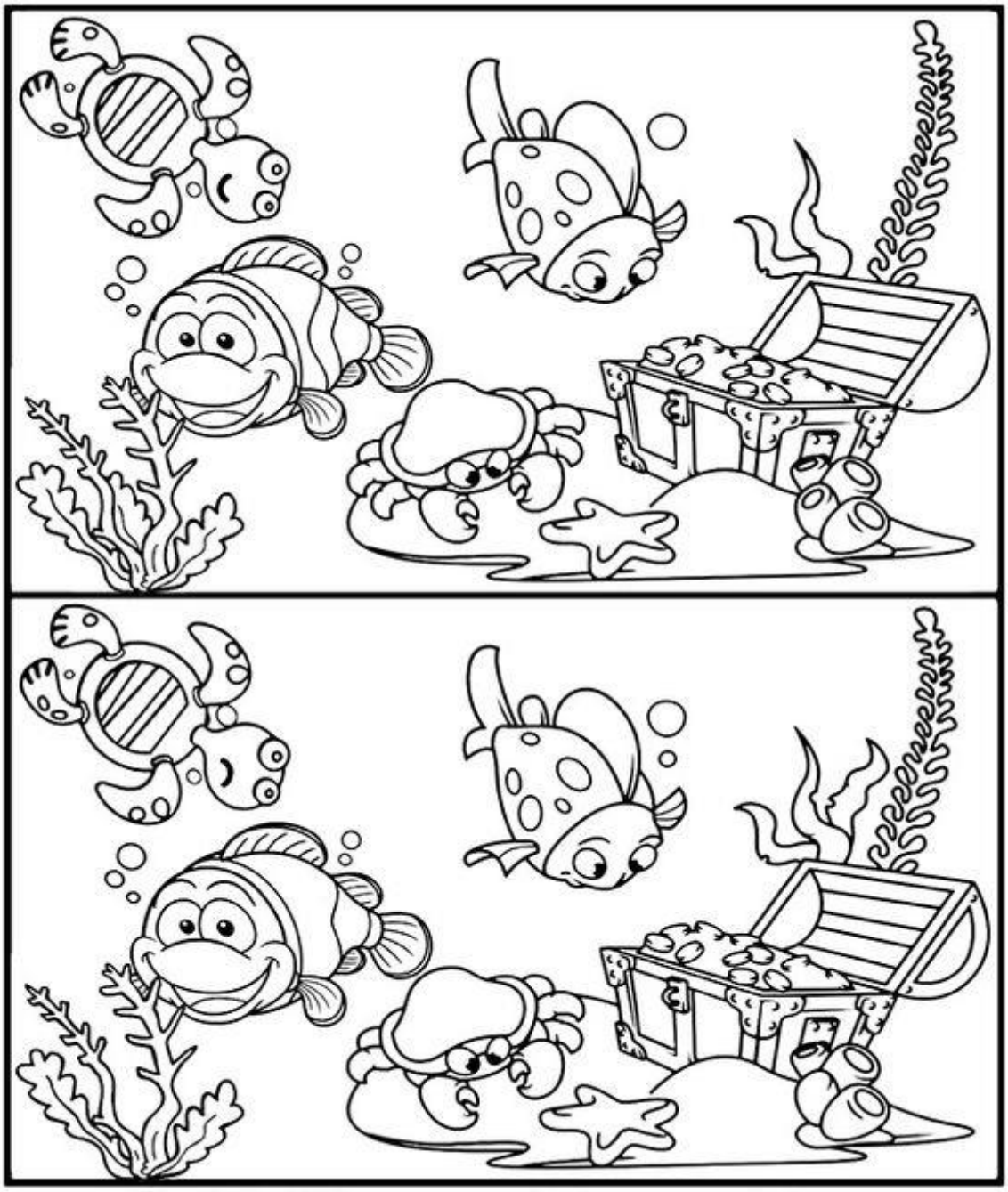
Do you know?
The king of hearts is the only one of the kings without mustache

SHAHEEL IBRAHEEM IV/ECE

SPOT THE DIFFERENCE



FIND 10 DIFFERENCES BETWEEN PICTURES



Find 9 differences between pictures

SATHICK BATCHA N – IV/ECE

TONGUE TWISTER

Do you know?
You blink about 84,000,000 times a year.

1. How much wood would a woodchuck chuck
if a woodchuck could chuck wood?
He would chuck, he would,
as much as he could, and
chuck as much wood as a woodchuck would
if a woodchuck could chuck wood.
2. Six sick hicks nick six slick bricks with
picks and sticks.
3. Peter Piper picked a peck of pickled peppers;
A peck of pickled peppers Peter Piper picked;
If Peter Piper picked a peck of pickled peppers,
Where's the peck of pickled peppers Peter Piper picked?
4. A skunk sat on a stump and thunk the stump stunk,
but the stump thunk the skunk stunk.
5. I thought a thought.
But the thought I thought
Wasn't the thought I thought I thought.
If the thought I thought I thought,
Had been the thought I thought,
I wouldn't have thought I thought.

K.VIMALRAJ -IV/YEAR

Do you know? e 1939 novel Gadsby is the longest book ever published that doesn't contain the letter 'e.'

mg;gh!!

md;G

vDk; thHj;ij!!

jhaha;

xUtuk; !!

Njhodha;

xUtuk; !!

tpiykjpf;fKbahj

,lj;jpy; ,Uf;Fk; tuk; !!

elf;ffw;WnfhLf;Fk;

Mrhd; !!

vd;idnrJf;fpaxU

rpw;gp!!

rpfuq;fis if fhl;ba

xUfyhk; !!

Vzpaha; xUtuk; !!

ePmOjhYk;>vd;

kfpo;r;rpapy; FspH

fhAk; xUCd;WNfhy; !!

jha; vd;idgj;Jkhjk;

jhd; Rke;jhs; !!

vd; jfg;gNdh>ehd; vd;

Foe;ijfisRkf;Fk; NghJk; $l

vd;idjhq;fpgpbj;Jf; nfhz;L ,Uf;fpwhH!!

ehd; f\;lk; vd;W

nrhy;Yk; Kd;Ng

me;jghuj;ijvd; mg;gh

md;gha; Ve;jpf; nfhs;fpwhh;!!

vd;id ,sturpahfNt

tsHj;Jtpl;L> ,d;Dk;

ePntspr;rj;Jf;F $l

tutpy;iymg;gh!!

tu $l epidf;f ,y;iy

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NjbghHj;Njd; !!

epidj;jJvJTk;

,y;iyGj;jfgf;fq;fspy; !!

eLtpy; rpygf;fq;fs;

fhdy; ePuha; Ngha;tpLfpd;wd!!

rpygf;fq;fs; ghukha; !!

rpygf;fq;fs; J}ukha; !!

rpygf;fq;fs; gf;fkha; !!

NjbNdd; !!

NjbghHj;Njd;

kfpo;r;rpvd;Dk; thHj;ij

fldha; $l fpilf;ftpy;iy

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vg;NghJfilrpgf;fk; tUk; !!

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tho;f;if

,dpikkl;Lk; tho;f;if ,y;iy!

,ad;why; vJTk; fpl;lhky; ,y;iy!

Kaw;rpnra;gtHNjhw;gjpy;iy!

Kd;Ndw;wk; fz;ltHVioAk; ,y;iy!

Jd;gk; te;jhy; J}f;fk; ,y;iy!

Jf;fNkvd;Wk; epue;juk; ,y;iy!

mtdpy; fhuzk; ,y;yhky; ,y;iy!

mWgJk; njhpe;jtHmfpyj;jpy; ,y;iy!

md;gpd; topapy; Nrhfq;fs; ,y;iy!

mJNtvd;Wk; Mde;jj;jpd; vy;iy!

SAROJA LAKSHMANAN
LAB TECH / ECE

fy;tpr; rhiy

fy;tpr; rhiyapd;

fhynts;sq;fs;

fdTf; Nfhyq;fspd;

ftpijnkhl;Lf;fs; !

,sikg;gUtj;jpd;

,dpaepidTfs;

Gul;lg; Gul;l

Gj;JapHjUk;

GJikf; fdtiyfs; !

Mrphpahpd; mwpTiufs;

Muhaj;jf;frpe;jidfs; ! - mit

rpe;jpf;f! rpe;jpf;f - ek;ik

Kd;Ndw;wg; ghijapd; Kbtpd;wp

Kl;fismfw;wp

KOikahf (ek;ik) ,l;Lr; nry;Yk;

Kd; khjphpfs; !

kdpjdpd; gUtq;fspy;

,sikvd;gJ XH ePHFkpop! - mit

fhyk; khwpDk; mopahj

ftpd;kpFnrhHf;fj;jpd;

fyitf; NfhHitfs;!

SAROJA LAKSHMANAN
LAB TECH / ECE

TO STUDENTS

Every Emperor is a crying & crawling Child,

When they r in childhood! like wise

Every Student is a good seed of Big bannian tree!

Decide yourself where have u been sown!

Yr thinking should be clear to achieve yr goal!

It’s a fertilizer to become a good seed!

SAROJA LAKSHMANAN
LAB TECH / ECE

CONSOLE OF HEART

Hallo My heart!

Y r U dull!

Open yr shell!

U r a machine!

I'm yr cussine!

Life is a wind

It's also blind!

It includes storm

but it has no bom!

Don't U have weight

There is no bright!

Just U think!

Say God thank!!

SAROJA LAKSHMANAN
LAB TECH / ECE

epytpd; fz;zhb (vJ?)

epythdXilapNy

NkfnkDk; tPjpapNy!

ePe;jpr; nry;Yk; ntz;zpyNt!

fhHKfpiytpyf;fpf; nfhz;L

mtrukha; tUtnjq;Nf?

ghy; epyNt cd; Kfj;ij

goq;fhyfz;zhbapNy

njspTlNdfhz;gjw;Nfh?

,utpNyNaghHj;Jf; nfhs;

,y;yhtpl;lhy; KbahJ!

mjpfhiyte;jnjd;why;

miye;NjhLk; fl;Lkuk;!

cdf;nfjpNuitj;jhd; mtd;

cskhufhz;gjw;Nf!

fz;nzjpNuitj;jhd; mtd;

flyoFjdpaoF!

SAROJA LAKSHMANAN
LAB TECH / ECE

md;Wk; ,d;Wk; - gw;Wk; njhw;Wk;

$b tho;e;jhy; Nfhbed;ik!md;W
$bg; Ngrpdhy; NfhbjPik!,d;W

xd;Wgl;lhy; cz;Ltho;T!md;W
xd;Wgl;lhy; cz;Lnjhw;W!,d;W

xd;W $b tho;e;Njhk; me;ehspy; !
xd;Wxd;wha; tho;fpNwhk; ,e;ehspy; !

md;Wgs;spfspy; elj;jpNdhk; xd;WNrHtpoh
,d;Nwhjdpikapy; cyh!

kztpohf;fspy; kf;fs; miymd;W!
khiykhw;wjha;khkd; $l ,y;iy ,d;W!

Fw;wk; ghHf;fpd; Rw;wk; ,y;iymd;W!
Rw;wk; ghHf;fpd; Fw;wk;(njhw;W) cz;L ,d;W!

Kfk; KO ngsHzkpaha; md;W
KfKbahy; gpiwepyhMdJ ,d;W

tPjpnaq;Fk; gps;isfspd; $l;lk; md;W!
gPjpahy; (nfhNuhdh) nfhs;isaha; thl;lk; ,d;W!

gfpHe;Jz;Ltho;e;jhy; gw;Wmd;W!
jdpj;Jz;Ltho;e;jhy; ,y;iynjhw;W ,d;W!

Rw;Wyhf;fs; nrd;Wfspj;Njhk; md;W

fw;Wk; tPNlfjpnad;Wfple;Njhk; ,d;W

,we;jhYk; tho;e;jhYk; NgHnrhy;yNtz;Lk;
,tHNghyahnud;W CH nrhy;yNtz;Lk; md;W!

,Ue;jhYk; tho;e;jhYk; CUf;Nfnjhptjpy;iy ,d;W

vd;WjzpAk; ,e;jRje;jpujhfk; md;W!
vd;WgzpAk; ,;e;jnfhNuhdhNtfk; ,d;W!

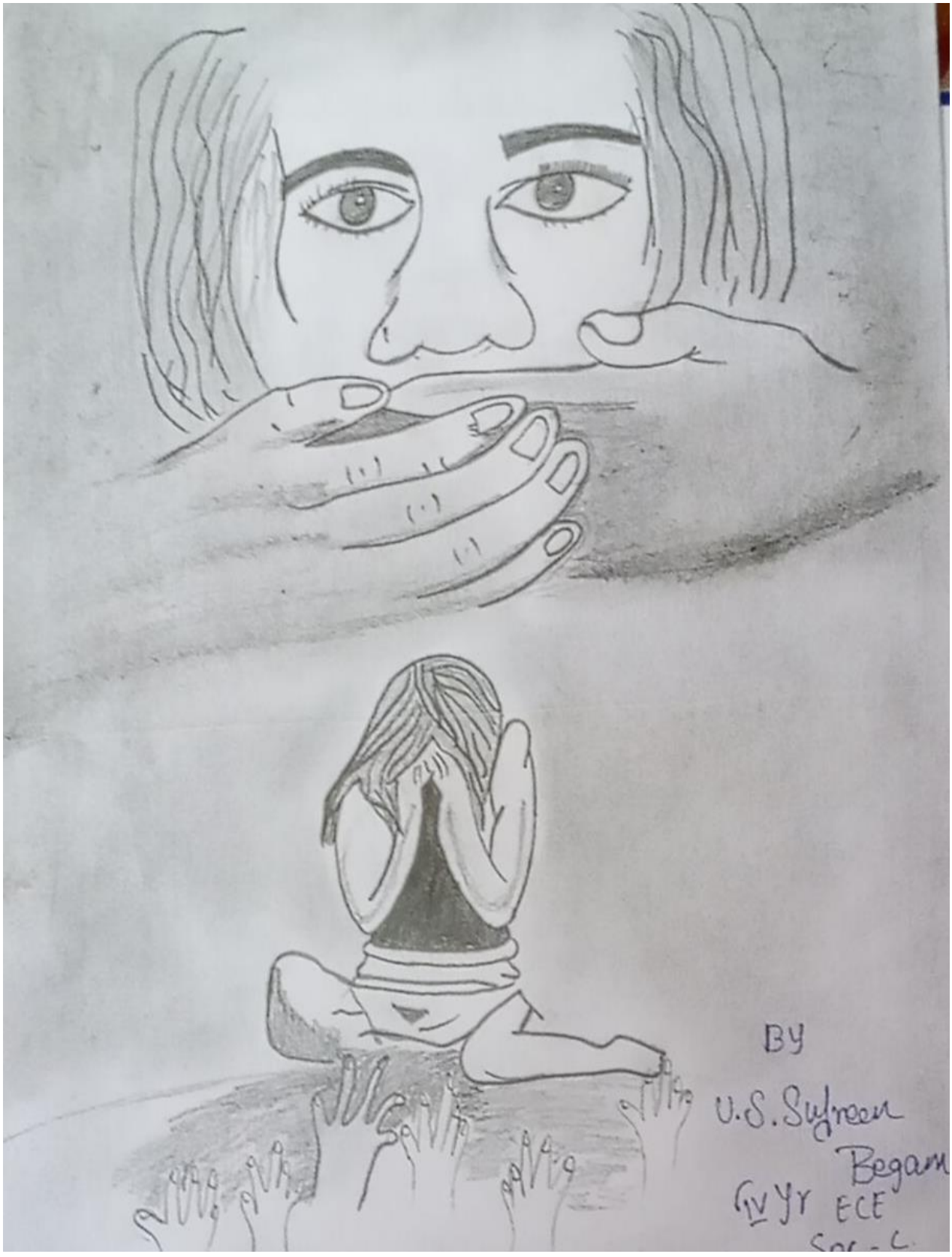
jPz;lhikxopg;Nghk; md;W!
jPz;lhikfspg;Nghk; ,d;W!

jdpj;jpU! tpopj;jpU! jtpHj;jpL!

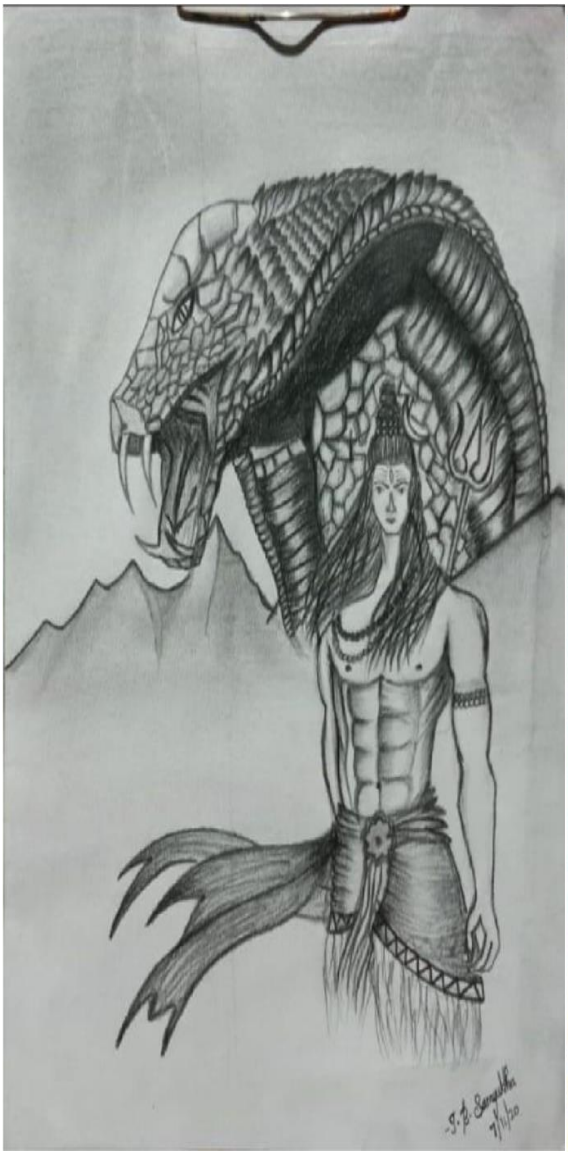
DR.R.KARTHIKA DEVI
PROFESSOR ECE

Art Gallery

S. YUVARAJAN-IIIYEAR/ECE


BY
U.S. Sufreen Begam
IV Yr ECE

SAMYUTHA – III / ECE

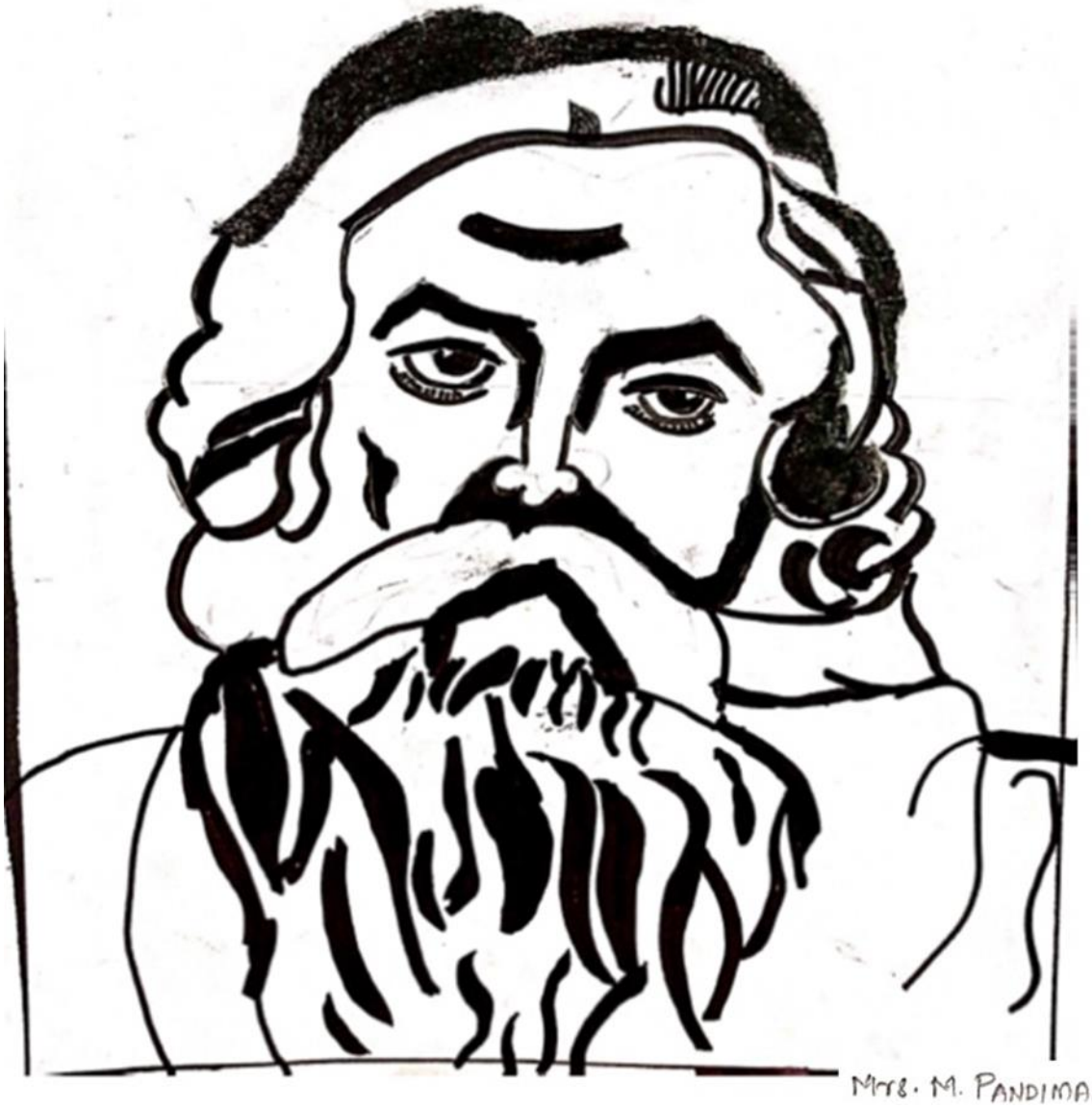


SAMYUTHA – III / ECE

Impact of cellphone

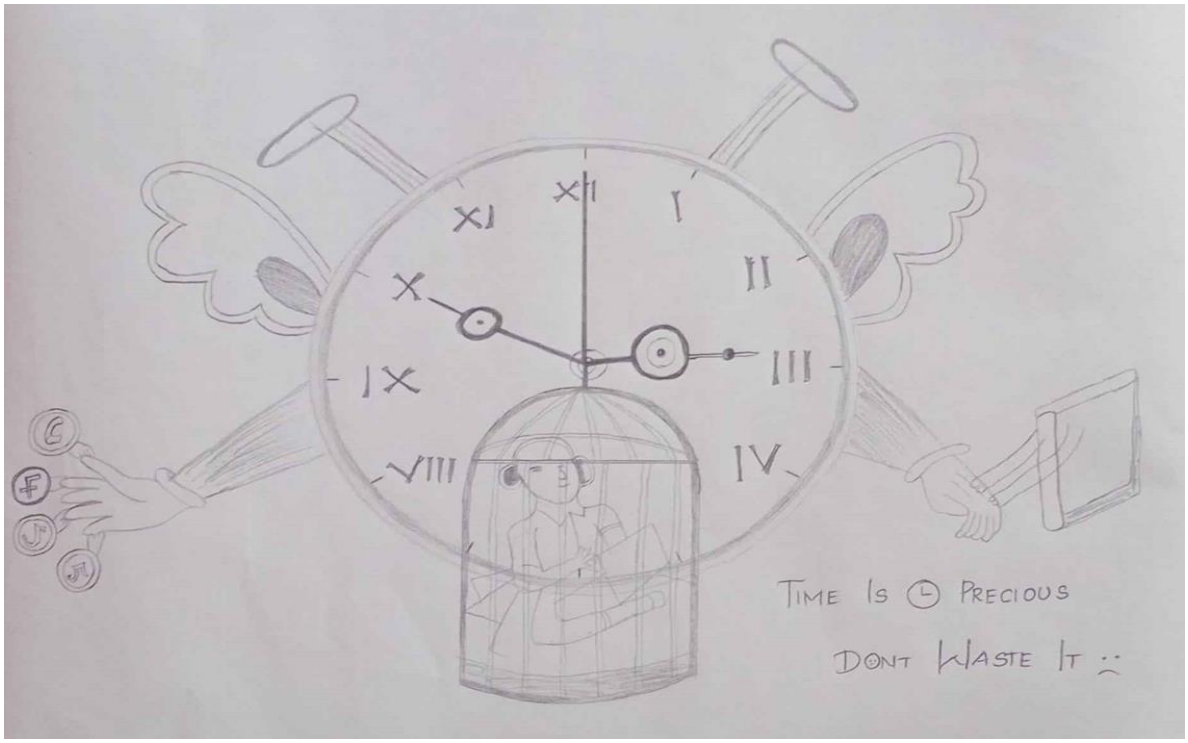
Mrs G. RAMU/BIYA
AP/ECE

Rabindranath Tagore

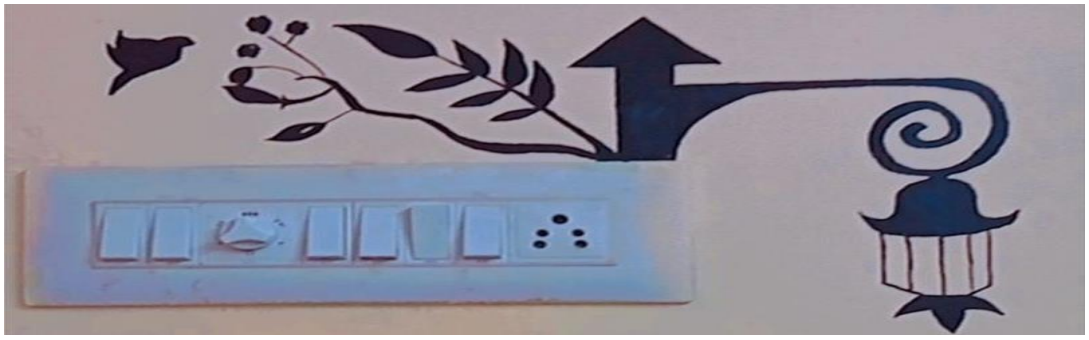



Light House
(Pencil Shading)
ART BY
Mrs. R. Devika
AP/ECE

SUFREEN BEGAUM – IV / ECE



SIVA SARITHA – IV / ECE



MYTHILI-II/ECE

MYTHILI-II/ECE

S.YUVARAJAN – III / ECE

S.YUVARAJAN – III / ECE